

REMARKS

Claims 1-14, 16-26, and 28-40 were presented for examination and were rejected.

The applicant has amended claim 26 to incorporate the features of claim 35. Accordingly, the applicant has canceled claim 35 without prejudice, and reserves the right to re-add the canceled claim to this or another application.

The applicant has also amended certain claims in order to correct inadvertent, typographical errors.

The applicant respectfully requests reconsideration in light of the amendments and the following comments.

35 U.S.C. 102 Rejection of Claims 21-23

Claims 1-4, 16-20, 26, and 28-40 were rejected under 35 U.S.C. 102(b) as being anticipated by "High-Efficiency High-Level Modulator for Use in Dynamic Envelope Tracking CDMA RF Power Amplifiers, IEEE 2001 (hereinafter "D1"). The applicant respectfully traverses the rejection.

Claim 1 recites:

1. A voltage summer including a transformer having a primary side and a secondary side, wherein a first voltage to be summed is connected to the primary side and a second voltage to be summed is connected to the secondary side.

Claim 16 recites:

16. A method of summing voltages including applying a first voltage to a primary side of a transformer and applying a second voltage to a secondary side of the transformer, wherein a sum of the first and second voltages is provided on one of the first or second sides of the transformer.

Nowhere does D1 teach or suggest what claim 1 recites — namely a voltage summer including a transformer having a primary side and a secondary side, where a first voltage to be summed is connected to the primary side and a second voltage to be summed is connected to the secondary side. Rather, D1 describes a switched mode power supply which may be modulated according to a baseband modulation input.

Referring to Figure 5 of D1, there is shown only one independent voltage source, V_{supply} . The voltage appearing across L_p is an induced voltage resulting from the coupling between L_p and L_s , and this is sensed by the op-amp in the feedback path. The model

shown in Figure 6 of D1 shows induced inductor voltages E_{lp} and E_{ls} . There is not shown, in D1, two voltages. The only voltage connected to the transformer is the voltage V_{supply} .

Hence, the circuit in D1 does not sum two voltages. For this reason, the applicant respectfully submits that the rejection of claim 1 is traversed. Because method claim 16 is of similar scope to that of apparatus claim 1, the applicant further submits that the rejection of claim 16 is also traversed.

Because claims 2-4 depend on claim 1 and because claims 17-20 depend on claim 16, the applicant respectfully submits that the rejection of them is also traversed.

Claim 26 recites:

26. A transformer including:

- a. a plurality of primary windings i , each having x_i turns in series, and a second winding having y turns in series;
- b. each turn of each primary winding closely coupled with a turn of each other primary winding; and
- c. each primary winding turn closely coupled with a secondary winding turn.
(emphasis added)

Claim 40 recites:

40. A transformer comprising a plurality i of primary windings and a secondary winding and having a turns ratio of primary winding to secondary winding of $x_i:y$, the transformer including:

- a. x_i turns in series in each primary winding i and y turns in series in the secondary winding;
- b. an equal number of turns in each primary and secondary windings; and
- c. each primary winding turn being closely coupled with a turn of every other primary winding and with a secondary winding turn.
(emphasis added)

Nowhere does D1 teach or suggest what claims 26 and 40 recite — namely that each primary winding turn is closely coupled with a secondary winding turn.

In fact, the Office action states on page 3, in the paragraph beginning with “Figure 7,” that each primary winding turn being closely coupled with a secondary winding turn “cannot be derived from [D1],” and the applicant agrees.

Referring to the instant application at page 13, line 20 to page 14, line 21, and shown in Figure 7, the invention provides close coupling of each turn of the primary winding with a turn of the secondary winding. This reduces the leakage inductance, which would normally restrict the high frequency response of the transformer. Thus, the claimed subject matter is advantageous over what is disclosed in D1.

With regard to another comment appearing in the same paragraph in the Office action, the applicant respectfully declines the suggestion made by the Office that "it *should* be made clear in claims 26 and 40 that the transformers are intended to be comprised in the voltage modulator according to claims 1-25." [*emphasis added*] If the Office instead is *requiring* that a change be made, the applicant respectfully requests the Office to cite the relevant patent law.

Lastly, the applicant would also like to point out an unsupported assertion stated in the Office action on page 3, in the paragraph beginning with "The idea of the present invention." In that paragraph, the Office states that "claims 26, 28-40 are also anticipated, e.g., *what if $x=y=1$?*" [*emphasis added*] Based on the applicant's understanding of what was meant by this statement, the applicant respectfully asserts that no such configuration is disclosed in D1. In any event, the point is moot because of the recited limitation of a plurality of primary windings wherein each primary winding turn being closely coupled with a secondary winding turn, which limitation was amended into claim 26 and originally appearing in claim 40.

For these reasons, the applicant respectfully submits that the rejection of claims 26 and 40 is traversed.

Because claims 28-39 depend on claim 26, the applicant respectfully submits that the rejection of them is also traversed.

Allowable Subject Matter

Claims 5-14 and 21-25 were objected to as being dependent upon a rejected base claim.

Because claims 5-14 are dependent on claim 1, because claims 21-25 are dependent on claim 16, and because the applicant has traversed the rejection of claims 1 and 6, the applicant also respectfully submits that the objection to claims 5-14 and claims 21-25 is also traversed.

Request for Reconsideration Pursuant to 37 C.F.R. 1.111

Having responded to each and every ground for objection and rejection in the last Office action, applicant respectfully requests reconsideration of the instant application pursuant to 37 CFR 1.111 and requests that the Examiner allow all of the pending claims and pass the application to issue.

If there are remaining issues, the applicant respectfully requests that Examiner telephone the applicant's agent so that those issues can be resolved as quickly as possible.

Respectfully,
Martin Paul Wilson

By **/Kenneth Ottesen/**
Kenneth Ottesen
Reg. No. 54353
732-578-0103 x222

DeMont & Breyer, L.L.C.
Suite 250
100 Commons Way
Holmdel, NJ 07733
United States of America